

## Information Society Trends

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### EUROPE

Trends: Topping the news is of the course the full liberalisation of the EU telecoms market that took place on 1 January 1998. Other important EU events include the adoption of a Green Paper on convergence and a draft Directive on copyrights in the information society, as well as the opening of an investigation into accounting rates.

### INFRASTRUCTURE

MFS Communications, the corporate telecoms services arm of the US long-distance operator WorldCom, has unveiled plans to invest 175 million Ecu in the interconnection, by mid-1998, of the fibre-optic networks it has developed in major European cities, including Amsterdam, Brussels, Paris, Frankfurt and London. On top of this, MFS is co-financing with the UK operator Cable and Wireless (C&W) the development of a 400 million Ecu worth transatlantic cable. MFS is thus confirming its position as one of the major rival for European operators in the corporate communications market.

### LEGISLATION AND POLICIES

The European Commission has adopted a Green Paper on the convergence of telecoms, media and the information technologies sectors which aims at launching a Europe-wide debate with interested parties on how the converged sectors should be regulated in the future (<http://www.ispo.cec.be/convergencegp/97623.html>).

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The European Commission has adopted a draft Directive on copyright and related rights in the information society which aims to adjust and complement the existing legal framework with emphasis on new on-line and off-line multimedia products and services.

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The European Commission has opened an investigation into charges paid to dominant operators for international phone calls. Accounting rates, which correspond to transfer prices between operators aimed to cover the cost of carrying calls, amount to an important part of these charges. But as a result of technological changes and consequent cost cuts, it is widely believed that these no longer reflect the true cost of calls.

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The European Commission has cleared the planned acquisition by the US operator Ameritech of a 34% minority stake in the incumbent Danish operator Tele Danmark. It stressed that it is the first time that a US operator acquires decisive

influence in a European operator and that this is taking place in a context where there is still uncertainty about the conditions under which the US market will be opened to European investments.

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The German Telecoms Regulatory Authority has asked the incumbent German operator Deutsche Telekom to stop collecting fees from customers that decide to switch to a competing operator unless it has given it official clearance.

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The German TV giants Bertelsmann and Kirch have suspended marketing operations involving their digital TV platform Premiere Digital and sales of the d-box decoder in response to European Commission warnings that this amounted to a partial implementation of the planned merger of the two firms' digital pay-TV operations ahead of official clearance, thus constituting a breach of European merger control rules.

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The Armenian government has agreed to sell a 90% stake worth 123 million Ecu in the state-owned telecoms operator ArmenTel to the national Greek operator OTE. The move is part of OTE's development strategy in the Black Sea and Balkan regions, which includes a 20% stake in the Serbian operator Telecom Serbia and a joint venture with America's Hughes Network Systems to develop a telecoms network in Ukraine.

## MARKET AND COMPANIES

An increasing number of European telecoms operators are planning or have already started to offer bundled fixed and mobile telephone services by which subscribers enjoy a single and cheaper subscription as well as a single telephone number. A pioneer in this converged telecoms market is the Danish operator Tele Danmark, which already has over 50,000 subscribers to its bundled service launched in September 1997. Other operators intend to follow suite, for instance Belgacom and Deutsche Telekom. However, mobile operators complain that incumbents operators capitalise on their fixed-network subscriber base, which they argue, constitutes an abuse of dominant position.

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The French cable TV operator Suez-Lyonnaise des Eaux said that it would not seek to establish a partnership to enter the French telecoms market in 1998. Lyonnaise intends to invest 30 million Ecu over five years to offer its 620,000 cable TV subscribers a large choice of new services, including telephony, digital TV and high-speed Internet access.

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The incumbent French telecoms operator France Télécom said it has agreed to spend 410 million Ecu on buying Casema, the largest Dutch cable TV operator with 1.1 million subscribers, from its mother company, the incumbent Dutch telecoms operator KPN.

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Cadence Design Systems, a US supplier of software tools and services for the design of computer, communications and electronics products, has agreed to team up with Scottish Enterprise, Scotland's main economic development organisation, to set up its largest design centre, which would employ up to 1,800 engineers by the year 2004. Cadence's decision is the culmination of Project Alba, a six-month benchmarking study realised in partnership with Scottish Enterprise, which concluded that Scotland has the potential to establish itself as a global leader in system-on-a-chip (SOC) design.

## TECHNOLOGY

The French pay-TV giant Canal+ has announced the launch, before the end of 1998, of its second-generation digital set-top box, the Multimedia Home Platform. It would act as a single control interface for all household communication appliances (TV set, PC, fixed and mobile phones) and provide access to interactive services and the Internet. The new decoding box would be based on the universal programming language Java and the MHEG (Multimedia Home Expert Group) standard. Canal+ is also seeking official support from the Digital Video Broadcasting (DVB) project, a group set up in 1993 that brings together over 200 companies from relevant sectors.

## SOCIAL, SOCIETAL AND CULTURAL

The German government said that all of Germany's 44,000 schools would enjoy access to the Internet by the beginning of the 2001/2002 academic year. To meet this objective, the German state and the incumbent operator Deutsche Telekom agreed to extend their 29 million Ecu worth joint initiative, "Schulen an Netz," launched in 1996, and invest respectively an extra 20 million Ecu and 30 million Ecu from 1999.

## NORTH AMERICA

Trends: Regulation tops the news in the USA with the adoption of the US NET Act and a temporary order against Microsoft, as well as the FCC's opposition to a US District Court decision lifting conditions to Baby Bells' entry into the long distance market. Also important are further moves towards consolidation of the US telecoms industry with three new mergers involving small carriers: SBC-SNET, AT&T-Teleport, Teleport-ACC.

## MULTIMEDIA SERVICES AND PRODUCTS

Intel, the world's leader in PC microprocessors, has said that it would develop a "lean client" machine, a concept that is very close to that of the network computer (NC), as it too would be priced less than \$500, have limited memory and computing power, and leave most of the intelligence to the network.

The lean client machine would be an end-to-end Intel device with an integrated Pentium chip and relying on a more powerful Pentium II or Pentium Pro-powered server. It would not necessarily have to rely on Microsoft's Windows platform and could rely on other operating systems, for instance from IBM, Novell or Oracle. The move could therefore constitute a first serious breach in the traditional alliance between Intel and Microsoft, the world's leader in PC software.

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The US regional telecoms operator Ameritech has announced the launch of a high-speed Internet access service based on ADSL, a technology that allows for the high-speed transmission of digitised data over regular phone lines

## LEGISLATION AND POLICIES

US Federal Judge Thomas Penfield Jackson has issued an order asking the US PC software giant Microsoft to stop bundling its Internet browser Explorer with its operating system Windows 95 and its follower, Windows 98, to be released in April 1998. The order bars Microsoft from forcing PC manufacturers that license Windows to also accept Explorer. The order will be in effect at least until May 1998, when the court revisits the issue based on a report to be prepared by an appointed special expert.

While bundling Windows and Explorer has allowed Microsoft to win a significant market share over arch-rival Netscape Communications, the order is likely to make it a lot easier for Netscape to distribute its own browser through PC makers.

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US President Bill Clinton has agreed to sign into law the No Electronic Theft Act, a controversial new bill aimed at curbing breach of copyrights. Under the so-called NET Act, offenders could be jailed for up to five years and have to pay up to \$250,000 in fines for pirating material such as software, video, music or literature of a value of \$2,500 or more over electronic networks, in particular the Internet.

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The US Federal Communications Commission (FCC) has said it would ask for the suspension of the decision of US District Court Judge Joe Kendall to let US regional telecoms operators enter the long-distance market without having to meet preliminary conditions, in particular that their home market is sufficiently open to competition.

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The Canadian regional operator New Brunswick Telephone has applied for a license to offer cable TV services over its telecoms network in 1998. While other Canadian operators are testing cable TV services, New Brunswick Telephone is the first that has firm plans to enter this market. This follows the Canadian Radio-television and Telecommunications Commission's decision to fully liberalise telecoms in 1998

## MARKET AND COMPANIES

The US regional telecoms operator SBC Communications said it has agreed to spend \$4.4 billion on purchasing the US local operator Southern New England Telecoms (SNET). The move seems aimed at gaining access to the local, long-distance, wireless and Internet service markets outside of SBC's core Western and Southwestern markets, in direct competition with rival Bell Atlantic-Nynex.

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The US long-distance giant AT&T said it has agreed to spend \$11.3 billion on purchasing Teleport Communications, the largest US competitive local exchange carrier (CLEC), a move that would give it immediate access to the US local telecoms market in over 60 large US cities, including New York City and Los Angeles. CLECs are small telecoms operators which build their own networks to bypass Baby Bells.

This shortly followed the decision by Teleport, which specialises in local telecoms and Internet access services, to spend \$1 billion on buying the small US long-distance operator ACC Corp., in a move to become a full-service provider.

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The Finnish telecoms manufacturer Nokia has agreed to spend \$120 million on purchasing Ipsilon Networks, a leading US supplier of open Internet Protocol (IP) platforms for fixed and mobile broadband networks. Ipsilon would be fully integrated in Nokia's infrastructure arm, Nokia Telecoms. The move is part of Nokia's strategy to have a stronger presence in the US data communications business.

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The US software giant Microsoft has said it would purchase Hotmail, a US start-up that has become the leading free Internet e-mail service with 9.5 million subscribers in less than two years, in a move to strengthen its grip on the unfolding Internet market.

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The US computer installation and maintenance company Network Associates has agreed to spend \$36 million on buying Pretty Good Privacy (PGP), a leading US provider of cryptographic solutions for secure electronic communications. The venture would have a strong rational in the security market as it would combine Network Associates' McAfee anti-virus software with PGP's Internet encryption software.

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The Japanese software company Softbank said it would spend \$51 million on taking a 22.5% stake in GeoCities, a US Internet start-up that allows Internauts to set up their own home page for free. Softbank said it would finance part of the investment by selling back shares in America's Yahoo!, the most popular Web search engine, but that it would retain a 30%

stake in Yahoo!. Softbank and GeoCities already collaborate in Japan, where they have set up a joint venture, GeoCities Japan Corp., in which they respectively own 60% and 40%. It has attracted 40,000 users since October 1997.

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The US telecoms giant AT&T said it has agreed to sell back its 2.5% stake in the US digital satellite broadcasting group DirectTV. AT&T would sell the stake to DirecTV for \$162 million, or a 10% premium compared to its 1996 buying purchasing price of \$137 million. The move is part of AT&T's strategy to refocus on its core telecoms activities.

## ASIA AND PACIFIC

Trends: Competition is heating up for NTT in the Japanese local telecoms market with the launch of cut-price services by TNet and JT. Competition is also gaining momentum in the overseas market with new initiatives by KDD and foreign operators.

## INFRASTRUCTURE

The Japanese telecoms giant Nippon Telegraph and Telephone (NTT) said it plans to wire up homes in isolated areas such as Hokkaido by next summer by using the wireless personal handyphone system (PHS) technology rather than by relying on fixed networks. It would provide households with two phone lines of 64 Kbit each.

## MULTIMEDIA SERVICES AND PRODUCTS

Four leading Japanese electronics groups, Hitachi, Matsushita, Mitsubishi and Toshiba, have announced that they would set up a consortium to jointly develop a smart home system for remote control over the Internet of home appliances, heating, lights, air conditioning and other functions, as well as connection to emergency and police services.

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The Japanese telecoms giant Nippon Telegraph and Telephone (NTT) said that its strategy would shift away from its focus on basic phone services and focus instead on the provision of multimedia services. NTT explained that telephony can no longer generate sustained profit and that it must therefore generate demand for new multimedia services.

## LEGISLATION AND POLICIES

The Japanese Ministry of Posts and Telecoms (MPT) has asked the Japanese Radio Regulatory Council to study deregulation measures regarding investment in satellite-based broadcasting. The MPT plans for industry deregulation by February 1998.

## MARKET AND COMPANIES

The Japanese long-distance operator Kokusai Denshin Denwa (KDD) has announced the launch of an Internet-based international phone service which offers prices 80% lower than KDD's normal calling rates. The service will be operated by KDD Communications, the Internet access arm of KDD.

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The regional operator Tokyo Telecoms Network Co. (TTNet) has launched a cut-price local and long-distance phone service in the Tokyo area in competition with the incumbent operator Nippon Telegraph and Telephone (NTT). With local prices 10% lower than NTT, TTNet is said to offer the country's cheapest local communications.

Rival Japan Telecom (JT) said it would launch its own cut-price local telecoms service in competition with NTT starting in February 1998.

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A number of US and European telecoms operators intend to take advantage of the liberalisation of international calling services, which took place at the end of 1997, to offer cut-rate overseas phone services in Japan. New comers would include Japanese subsidiaries of AT&T, Cable and Wireless (C&W), Global One and Telecom Italia.

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The Japanese digital satellite broadcasting (DSB) systems JSkyB and PerfecTV have unveiled plans to merge their operations. The move would leave only two rival DSB systems, the second being DirecTV Japan (DTVJ), which is led by America's Hughes Communications. JSkyB is owned by the US media giant News Corp. and the Japanese software, TV and electronics groups Softbank, Fuji TV Network and Sony. PerfecTV is led by the Japanese trading houses Mitsui, Itochu, Sumitomo and Nissho Iwai.

## TECHNOLOGY

The Japanese electronics group NEC said it has developed an encryption technology that is safer than the popular RSA technology and more difficult to break than the next-generation of elliptic encryption code. It would be marketed in mid-1998.

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A group of 20 leading high-tech companies said they intend to test in Japan in March 1998 a technology that allows for the high-speed transmission of data over wireless personal handyphone system (PHS) circuits. While PHS currently offer a 32 Kbit per second transmission speed, the new technology would increase that to 25-30 Mbit per second. Involved companies would

include the Japanese telecoms operators NTT, KDD and DDI, the Japanese electronics groups NEC and Fujitsu, and possibly the US and European telecoms equipment manufacturers Motorola and Ericsson.

## MIDDLE-EAST

### LEGISLATION AND POLICIES

The Israeli government agreed to let the UK telecoms operator Cable and Wireless (C&W) increase its stake in the incumbent telecoms operator Bezeq to 20% from 10.2%.

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